

## Powder Molding Type

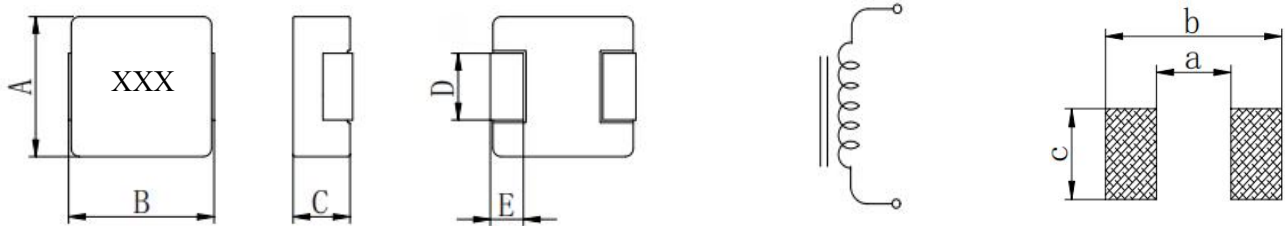
### BCIHP07SC-Series

- Photograph picture



### BCIHP07SC

- Dimensions



| ITEM               | A(mm)   | B(mm)    | C(mm)  | D(mm)    | E(mm)    | a(mm) | b(mm) | c(mm) |
|--------------------|---------|----------|--------|----------|----------|-------|-------|-------|
| BCIHP0715SC-Series | 6.6±0.3 | 7.10±0.3 | 1.5MAX | 3.00±0.3 | 1.60±0.5 | 3.7   | 8.4   | 3.5   |
| BCIHP0718SC-Series | 6.6±0.3 | 7.10±0.3 | 1.8MAX | 3.00±0.3 | 1.60±0.5 | 3.7   | 8.4   | 3.5   |
| BCIHP0724SC-Series | 6.6±0.3 | 7.10±0.3 | 2.4MAX | 3.00±0.3 | 1.60±0.5 | 3.7   | 8.4   | 3.5   |
| BCIHP0730SC-Series | 6.6±0.3 | 7.10±0.3 | 3.0MAX | 3.00±0.3 | 1.60±0.5 | 3.7   | 8.4   | 3.5   |
| BCIHP0740SC-Series | 6.6±0.3 | 7.10±0.3 | 4.0MAX | 3.00±0.3 | 1.60±0.5 | 3.7   | 8.4   | 3.5   |
| BCIHP0750SC-Series | 6.6±0.3 | 7.10±0.3 | 5.0MAX | 3.00±0.3 | 1.60±0.5 | 3.7   | 8.4   | 3.5   |

- Part Numbering

BCIHP
0730SC
-
4R7
M

A            B            C            D

A: Series(系列代號)

B: Dimension(尺寸)

C: Inductance(電感值)

D: Inductance Tolerance(電感值公差)

B×C

4R7=4.7uH

M=±20% N=±30%

- Features

1. Compliance with RoHs.
2. Lowest DCR.
3. Frequency range up to 3.0MHz.
4. Handles high transient current spikes without saturation
5. Ultra low buzz noise, due to composite construction.

- Applications

1. DC/DC converter for CPU in Notebook PC.
2. Battery powered devices.
3. Cellular phones LCD displays, HDDs, DVCs, DSCs, PDA etc.
4. Thin type on-board power supply module.

- 特點

1. 符合 RoHs.
2. 低電阻.
3. 頻率可達到 3.0 MHz.
4. 可處理在未飽和時的高瞬間電流.
5. 設計緊湊/超低噪音

- 應用

1. 用於筆記本電腦處理器的DC/DC轉換設備.
2. 電源,電池設備.
3. 適用於手機液晶屏顯示,HDD, DVC, DSC, PDA 等.
4. 薄型車載電源模組.

## Powder Molding Type

### BCIHP07SC-Series

- Specification

| ITEM             | INDUCTANCE $\mu\text{H}$<br>@100KHZ,1.0V,0A(1) | DCR $\text{m}\Omega$ 25°C<br>MAX. | HEAT RATING<br>CURRENT DC AMPS<br>( <sup>5</sup> ) TYPICAL( $I_{\text{rms}}$ ) | SATURATION<br>CURRENT DC AMPS<br>( <sup>6</sup> ) TYPICAL( $I_{\text{sat}}$ ) |
|------------------|--|-----------------------------------|--|---|
| BCIHP0715SC-R47M | 0.47   | 8.5                               | 10.0   | 16.0  |
| BCIHP0715SC-R56M | 0.56   | 11.0                              | 9.0  | 14.0  |
| BCIHP0715SC-R68M | 0.68   | 12.0                              | 8.5  | 12.0  |
| BCIHP0715SC-R82M | 0.82   | 17.0                              | 8.0  | 10.0  |
| BCIHP0715SC-1R0M | 1.0  | 21.0                              | 6.0  | 9.0   |
| BCIHP0715SC-2R2M | 2.2  | 54.0                              | 3.8  | 7.0   |
| BCIHP0715SC-3R3M | 3.3  | 63.0                              | 3.5  | 5.5   |
| BCIHP0715SC-4R7M | 4.7  | 85.0                              | 3.2  | 5.0   |
| BCIHP0715SC-6R8M | 6.8  | 135.0                             | 2.5  | 4.0   |
| BCIHP0715SC-100M | 10.0   | 175.0                             | 2.0  | 3.0   |
| BCIHP0718SC-R10M | 0.1  | 2.3                               | 25.0   | 38  |
| BCIHP0718SC-R22M | 0.22   | 5.2                               | 14.0   | 24  |
| BCIHP0718SC-R33M | 0.33   | 6.8                               | 12.0   | 22  |
| BCIHP0718SC-R47M | 0.47   | 8.4                               | 11.0   | 18  |
| BCIHP0718SC-R68M | 0.68   | 12.7                              | 9.0  | 17  |
| BCIHP0718SC-1R0M | 1.0  | 20.0                              | 7.0  | 12  |
| BCIHP0718SC-1R5M | 1.5  | 26.0                              | 6.5  | 9.2   |
| BCIHP0718SC-2R2M | 2.2  | 35.0                              | 6.0  | 8.0   |
| BCIHP0718SC-3R3M | 3.3  | 50.0                              | 4.5  | 6.0   |
| BCIHP0718SC-4R7M | 4.7  | 70.0                              | 3.5  | 5.0   |
| BCIHP0718SC-6R8M | 6.8  | 110.0                             | 2.8  | 3.5   |
| BCIHP0718SC-100M | 10.0   | 155.0                             | 2.3  | 2.5   |
| BCIHP0718SC-220M | 22.0   | 350.0                             | 1.8  | 2.3   |
| BCIHP0724SC-R22M | 0.22   | 3.2                               | 21.0   | 34.0  |
| BCIHP0724SC-R33M | 0.33   | 4.1                               | 18.0   | 24.5  |
| BCIHP0724SC-R47M | 0.47   | 6.5                               | 15.0   | 22.0  |
| BCIHP0724SC-R56M | 0.56   | 6.5                               | 13.0   | 17.0  |
| BCIHP0724SC-R68M | 0.68   | 7.0                               | 12.0   | 16.0  |
| BCIHP0724SC-1R0M | 1.0  | 13.5                              | 9.0  | 15.0  |
| BCIHP0724SC-1R5M | 1.5  | 20.0                              | 8.0  | 13.5  |
| BCIHP0724SC-2R2M | 2.2  | 28.0                              | 7.0  | 10.0  |
| BCIHP0724SC-3R3M | 3.3  | 39.0                              | 5.5  | 8.0   |
| BCIHP0724SC-4R7M | 4.7  | 50.0                              | 5.0  | 6.5   |
| BCIHP0724SC-6R8M | 6.8  | 70.0                              | 4.0  | 6.0   |
| BCIHP0724SC-100M | 10.0   | 101.0                             | 3.1  | 4.0   |
| BCIHP0724SC-150M | 15.0   | 160.0                             | 2.5  | 3.3   |
| BCIHP0724SC-220M | 22.0   | 230.0                             | 2.0  | 2.5   |
| BCIHP0730SC-R10M | 0.10   | 1.5                               | 37.0   | 45.0  |
| BCIHP0730SC-R22M | 0.22   | 3.0                               | 23.0   | 34.0  |
| BCIHP0730SC-R33M | 0.33   | 4.2                               | 20.0   | 25.0  |
| BCIHP0730SC-R47M | 0.47   | 5.5                               | 16.5   | 20.0  |
| BCIHP0730SC-R56M | 0.56   | 6.0                               | 16.5   | 18.0  |

## Powder Molding Type

### BCIHP07SC-Series

- Specification

| ITEM             | INDUCTANCE $\mu$ H<br>@100KHZ,1.0V,0A(1) | DCR $m\Omega$ 25°C<br>MAX. | HEAT RATING<br>CURRENT DC<br>AMPS<br>( <sup>5</sup> ) TYPICAL(Irms) | SATURATION<br>CURRENT DC AMPS<br>( <sup>6</sup> ) TYPICAL(Isat) |
|------------------|--|----------------------------|---|---|
| BCIHP0730SC-R68M | 0.68                                     | 6.3                        | 15.0  | 17.0  |
| BCIHP0730SC-R82M | 0.82                                     | 8.0                        | 13.0  | 16.0  |
| BCIHP0730SC-1R0M | 1.0                                      | 10.0                       | 12.0  | 15.0  |
| BCIHP0730SC-1R5M | 1.5                                      | 15.0                       | 9.5   | 12.0  |
| BCIHP0730SC-2R2M | 2.2                                      | 20.0                       | 8.5   | 10.0  |
| BCIHP0730SC-3R3M | 3.3                                      | 35.0                       | 6.0   | 9.5   |
| BCIHP0730SC-4R7M | 4.7                                      | 40.0                       | 5.5   | 9.0   |
| BCIHP0730SC-5R6M | 5.6                                      | 42.0                       | 5.4   | 6.5   |
| BCIHP0730SC-6R8M | 6.8                                      | 55.0                       | 4.5   | 6.0   |
| BCIHP0730SC-8R2M | 8.2                                      | 60.0                       | 4.4   | 5.5   |
| BCIHP0730SC-100M | 10.0                                     | 68.0                       | 4.0   | 5.5   |
| BCIHP0730SC-150M | 15.0                                     | 122.0                      | 3.0   | 4.0   |
| BCIHP0730SC-220M | 22.0                                     | 145.0                      | 2.5   | 3.0   |
| BCIHP0730SC-330M | 33.0                                     | 270.0                      | 2.0   | 2.5   |
| BCIHP0730SC-470M | 47.0                                     | 385.0                      | 1.5   | 2.0   |
| BCIHP0740SC-R68M | 0.68                                     | 4.8                        | 17.0  | 19.0  |
| BCIHP0740SC-1R0M | 1.0                                      | 6.6                        | 13.5  | 16.0  |
| BCIHP0740SC-1R5M | 1.5                                      | 10.0                       | 12.4  | 12.5  |
| BCIHP0740SC-2R2M | 2.2                                      | 18.0                       | 9.0   | 11.0  |
| BCIHP0740SC-3R3M | 3.3                                      | 25.0                       | 7.0   | 9.5   |
| BCIHP0740SC-4R7M | 4.7                                      | 30.0                       | 6.5   | 8.0   |
| BCIHP0740SC-6R8M | 6.8                                      | 50.0                       | 5.0   | 6.5   |
| BCIHP0740SC-100M | 10.0                                     | 65.0                       | 4.5   | 5.0   |
| BCIHP0740SC-150M | 15.0                                     | 95.0                       | 3.7   | 4.5   |
| BCIHP0740SC-220M | 22.0                                     | 125.0                      | 3.3   | 4.0   |
| BCIHP0740SC-330M | 33.0                                     | 240.0                      | 2.2   | 3.0   |
| BCIHP0740SC-470M | 47.0                                     | 320.0                      | 1.8   | 2.5   |
| BCIHP0750SC-R47M | 0.47                                     | 3.9                        | 20.0  | 21.0  |
| BCIHP0750SC-R68M | 0.68                                     | 4.5                        | 16.0  | 18.0  |
| BCIHP0750SC-R82M | 0.82                                     | 4.9                        | 15.0  | 17.0  |
| BCIHP0750SC-1R0M | 1.0                                      | 6.6                        | 12.0  | 13.0  |
| BCIHP0750SC-1R5M | 1.5                                      | 10.0                       | 9.5   | 10.0  |
| BCIHP0750SC-2R2M | 2.2                                      | 12.5                       | 9.0   | 9.5   |
| BCIHP0750SC-3R3M | 3.3                                      | 22.0                       | 8.5   | 9.0   |
| BCIHP0750SC-4R7M | 4.7                                      | 29.0                       | 6.0   | 8.0   |
| BCIHP0750SC-6R8M | 6.8                                      | 41.0                       | 5.5   | 6.3   |
| BCIHP0750SC-8R2M | 8.2                                      | 48.0                       | 5.5   | 5.5   |
| BCIHP0750SC-100M | 10.0                                     | 60.0                       | 4.5   | 5.3   |
| BCIHP0750SC-150M | 15.0                                     | 90.0                       | 3.1   | 4.0   |
| BCIHP0750SC-220M | 22.0                                     | 140.0                      | 2.6   | 3.5   |
| BCIHP0750SC-330M | 33.0                                     | 200.0                      | 2.3   | 3.0   |
| BCIHP0750SC-470M | 47.0                                     | 290.0                      | 2.0   | 2.6   |

## Powder Molding Type

### BCIHP07SC-Series

Note:

- (1) Tolerance of Inductance:  $N=\pm 30\%$ ,  $M=\pm 20\%$ .
  - (2) All test data is referenced to 25°C ambient.
  - (3) Inductance is measured at 100KHz. 25°C ambient.
  - (4) Operating Temperature Range-50°C to +125°C.
  - (5) DC current ( $I_{rms}$ ) (A) that will cause an approximate  $\Delta T$  of 40°C.
  - (6) DC current ( $I_{sat}$ ) (A) that will cause  $L_0$  to drop approximately 30%.
  - (7) The part Temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature Part temperature should be verified in the end application.
- (1) 電感的公差： $N=\pm 30\%$ ,  $M=\pm 20\%$ .
  - (2) 所有的測試資料應該是在 25°C 的環境溫度下測試.
  - (3) 感值測試頻率 100KHz.
  - (4) 操作溫度範圍 - 50°C 到 +125°C .
  - (5) 加 DC ( $I_{rms}$ ) 電流值 (A) 會導致  $\Delta T$  40°C 左右的變化.
  - (6) 加 DC ( $I_{sat}$ ) 電流值 (A) 會導致初始值下降 30% 左右.
  - (7) 產品的溫度不能超過 125°C，即使在最壞的操作情況下，基板設計，元件放置，PWB 尺寸和厚度，氣流和一些冷卻設備都會影響產品溫度，產品溫度要在最終應用時才被驗證.

## Powder Molding Type

### BCIHP07SC-Series

#### ● Material List

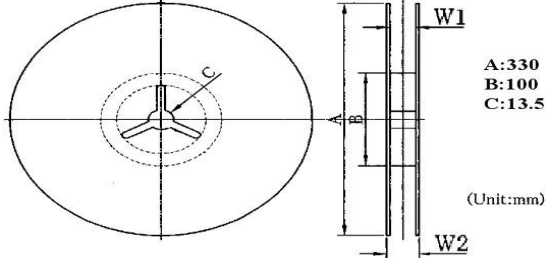


| NO | ITEM              | Materials                                 |
|----|-------------------|---|
| 1  | Core              | Magnetic Metal Powder FeSiCr or equivalen |
| 2  | Wire              | Polyester Wire or equivalen               |
| 3  | External Electode | Copper                                    |
|    | Electroplating    | Sn  |

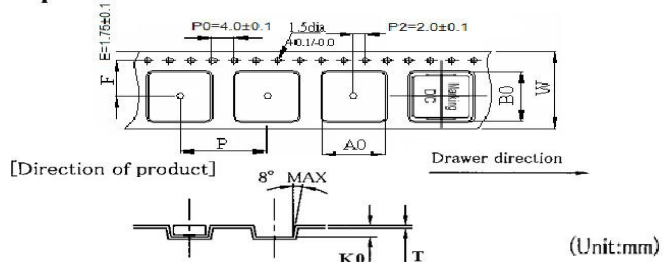
#### ● Packaging Information

##### (1) Reel Dimension & Tape Dimension / Packaging Quantity

###### Reel Dimensions

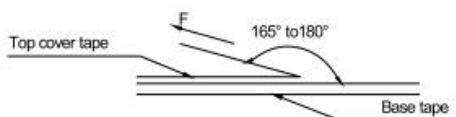


###### Tape Dimensions



| ITEN        | DIMENSIONS (m/m) |        |        |       |        |        |        |       |       |        |
|-------------|------------------|--------|--------|-------|--------|--------|--------|-------|-------|--------|
|             | Q'TY (PCS)       | W1±0.3 | W2±0.5 | W±0.3 | A0±0.1 | B0±0.1 | K0±0.1 | P±0.1 | F±0.1 | T±0.05 |
| BCIHP0715SC | 2000             | 16.80  | 23.10  | 16.00 | 7.10   | 7.60   | 1.8    | 12.00 | 7.50  | 0.40   |
| BCIHP0718SC | 1500             | 16.80  | 23.10  | 16.00 | 7.10   | 7.60   | 2.5    | 12.00 | 7.50  | 0.40   |
| BCIHP0724SC | 1500             | 16.80  | 23.10  | 16.00 | 7.10   | 7.60   | 2.5    | 12.00 | 7.50  | 0.40   |
| BCIHP0730SC | 1000             | 16.80  | 23.10  | 16.00 | 7.10   | 7.60   | 3.5    | 12.00 | 7.50  | 0.40   |
| BCIHP0740SC | 1000             | 16.80  | 23.10  | 16.00 | 7.10   | 7.60   | 4.5    | 12.00 | 7.50  | 0.40   |
| BCIHP0750SC | 1000             | 16.80  | 23.10  | 16.00 | 7.10   | 7.60   | 5.5    | 12.00 | 7.50  | 0.40   |

##### (2) Tearing Off Force



| Room Temp. (°C) | Room Humidity (%) | Room atm (hPa) | Tearing Speed mm/min |
|-----------------|-------------------|----------------|----------------------|
| 5~35            | 45~85             | 860~1060       | 300                  |

The force tearing off cover 10 to 130 grams (0.1N to 1.3N) in the arrow direction under the following conditions.

#### ● Storage conditions/Note things

##### (1) Storage temperature and humidity conditions :

1. Product packing with Carrier tape: +5°C~+40°C and less than 60% RH.
2. Product alone: -20°C~+60°C and less than 60% RH.

##### (2) Products should be used within 6 months.

##### (3) The packaging material should be kept where no chlorine or sulfur exists in the air.

##### (4) Do not touch the electrodes (soldering terminals) with fingers as this may lead to deterioration of solder ability.

##### (5) The use of tweezers or vacuum pick-ups is strongly recommended for individual components.

##### (6) Bulk handling should ensure that abrasion and mechanical shock are minimized.

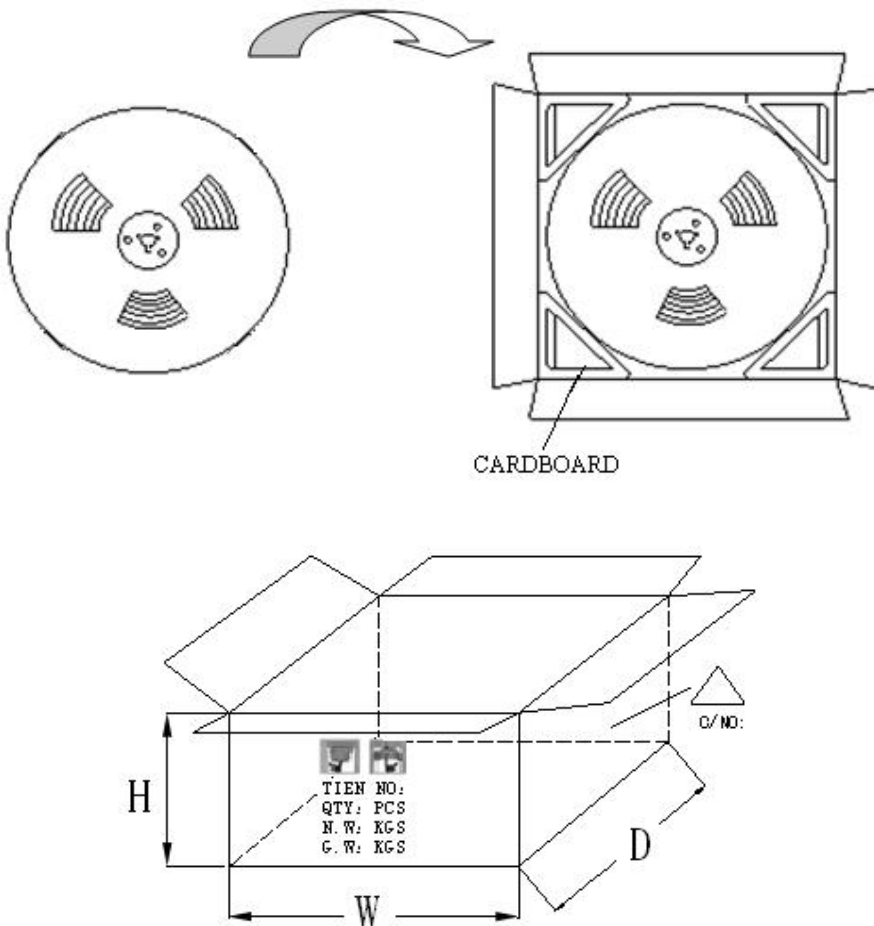
# SMD Power Inductors

## BCIHP07SC-Series

### ITEM

Packing method & Dimensions

Box Size



W=345mm  
D=345mm  
H=185mm

| ITEM        | Packing Quantity | Reel Quantity | Total Quantity |
|-------------|------------------|---------------|----------------|
| BCIHP0715SC | 2000 Pcs/Reel    | 6 Reel/Box    | 12,000Pcs/Box  |
| BCIHP0718SC | 1500 Pcs/Reel    | 6 Reel/Box    | 9,000Pcs/Box   |
| BCIHP0724SC | 1500 Pcs/Reel    | 6 Reel/Box    | 9,000Pcs/Box   |
| BCIHP0730SC | 1000 Pcs/Reel    | 6 Reel/Box    | 6,000Pcs/Box   |
| BCIHP0740SC | 1000 Pcs/Reel    | 6 Reel/Box    | 6,000Pcs/Box   |
| BCIHP0750SC | 1000 Pcs/Reel    | 6 Reel/Box    | 6,000Pcs/Box   |

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